The VacScene

Public Health – Seattle & King County **Immunization Newsletter** Volume 12, Number 5 **November/December 2006**

What's Inside?

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Public Health - Seattle & King County
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The VacScene is a publication of Public Health – Seattle & King County written for health professionals. Content is consistent with the most current recommendations from the Centers for Disease Control and Prevention (CDC) and the Advisory Committee on Immunization Practices (ACIP).

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New General Recommendations on Immunization

The Advisory Committee on Immunization Practices (ACIP) -- a national panel of immunization experts –has updated its 2002 general recommendations on immunization in the United States. The new recommendations were published in the Center for Disease Control's (CDC) Morbidity and Mortality Weekly Report (MMWR) on December 1, 2006. These recommendations provide technical guidance about common vaccination concerns for clinicians and other health care providers who administer vaccines.

Principal changes in the new general recommendations include:

1) Expansion of the discussion of vaccination spacing and timing
2) An increased emphasis on the importance of injection technique/age/body mass in determining appropriate needle length
3) Expansion of the discussion of storage and handling of vaccines, with a table defining the appropriate storage temperature range for inactivated and live vaccines
4) Expansion of the discussion of altered immunocompetence, including new recommendations about use of live-attenuated vaccines with therapeutic monoclonal antibodies
5) Reporting adverse events following vaccination
6) Minor changes to the recommendations about vaccination during pregnancy and vaccination of internationally adopted children, in accordance with new ACIP vaccine-specific recommendations for use of inactivated influenza vaccine and hepatitis B vaccine
7) Vaccination programs and information sources

The 2006 General Recommendations Statement also features visual elements, such as diagrams, images, and tables. Some of the more notable additions include: 1) An updated table of contraindications and precautions to commonly used vaccines; 2) images displaying the correct anatomical sites for intramuscular and subcutaneous injections for infants and adults; 3) a table outlining the treatment of anaphylaxis, and 4) a table comparing the advantages and disadvantages of various types of thermometers used to monitor vaccine storage temperatures.

Vaccination risks range from common, minor, and local adverse effects to rare, severe, and life-threatening conditions. Therefore, recommendations for vaccination practices balance scientific evidence of benefits for each person and to society against the potential costs and risks for vaccination for the individual and programs. To view the complete article in CDC's Morbidity and Mortality Weekly Report (MMWR), please visit:
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5515a1.htm

This report, ACIP recommendations for each vaccine, and other information about vaccination can be accessed at CDC's website at:
http://www.cdc.gov/nip/publications/acip-list.htm

King County VFC News -Vaccines for Children Program-

Revised Usage Guidelines: Meningococcal Conjugate Vaccine (MCV4)

A recent announcement stated that "the shortage of MCV4 is over." However, the supply of state-funded MCV4 for children and adolescents remains insufficient to immunize all teens for whom the vaccine is routinely indicated. Consequently, Public Health recommends that providers expand their vaccination efforts as local supplies permit, while continuing to prioritize older adolescents. Routine vaccination of 11-12 year-olds remains the lowest priority when supplies are limited. For more information, see: **http://www.doh.wa.gov/cfh/Immunize/documents/vacusage06.pdf.** Please note that the CDC will not increase the total amount of MCV4 available to Washington State's VFC Program until sometime in 2007.

Hepatitis A Vaccine Shortage

The ongoing shortage of hepatitis A vaccine is the result of the change in schedule and licensure for hepatitis A vaccine allowing for the vaccination of children 12-23 months of age after which the manufacturer was unable to keep up with the increased demand. We do not know when adequate supplies will be available, and anticipate the shortage may continue for months. Please order carefully (a 30-40 day supply at time) and resist the urge to stockpile vaccine, which will magnify the local shortage. We will maintain backorder lists and ship product as soon as it becomes available.

Darker Days, Stormy Nights

Every health care provider should have a detailed backup storage plan in the event of an extended power outage (three hours or more). A basic plan is in the VFC Provider Manual. Customize it by listing a nearby emergency storage location (one with a generator) and the contact information of people responsible for ensuring vaccine is safely moved. Please see the following tips about packing vaccine for transport. **Call Public Health at (206) 296-4774 for assistance with preparation**.

PACKING REFRIGERATED VACCINES

- Must **not** be exposed to temperatures below 35F
- Refrigerated cold-packs are preferred for packing
- If frozen cold-packs are used, leave them at room temperature until they begin to sweat before placing them in a cooler with vaccine; do **not** use dry ice
- Separate vaccines from cold-packs with crumpled paper or bubble wrap: vaccine first, then packing layer, then cold-packs
- Put a thermometer in with the vaccine

PACKING FROZEN VACCINES

- Frozen vaccines must **not** thaw and re-freeze
- Frozen vaccines exposed to refrigerator temperatures must remain at refrigerator temperatures to be used
- Dry ice is preferred for packing and transporting; frozen cold-packs can be used if the time needed to transport vaccine will be 15 minutes or less
- Pack vaccine with a thermometer, then dry ice or cold-packs

VFC Program Calendar

- January 1, 2007: Public Health offices closed
- January 3, 2007: first shipment date of the New Year
- February 2007: proposed date for changeover to the CDC's nationwide vaccine distribution system

Meningococcal Vaccine and Guillain-Barré Syndrome – Is there a link?

CDC and the FDA are currently investigating reports of Guillain-Barré Syndrome (GBS) among adolescents who received the tetravalent meningococcal vaccine (MCV4), Menactra. According to the Vaccine Adverse Event Reporting System (VAERS), there were 17 confirmed cases of GBS that occurred between March 2005 through September 2006. Fifteen of these persons were aged 11 to 19 years and developed symptoms within six weeks after vaccination. Two other case-patients were aged 20 years or older and had a symptom onset of 2-33 days after receiving Menactra.

The data available at this time are not conclusive, but suggest there may be a small increase in risk for GBS after vaccination. Because of the significant rates of meningococcal disease in populations for whom vaccination is indicated, there has been no change in CDC's recommendations for use of Menactra.

When obtaining consent for MCV4 vaccination, adolescents and caregivers should be informed of this investigation. A revised Vaccine Information Statement for Menactra should also be used and is available at: http://www.cdc.gov/nip/publications/VIS/vis-mening.pdf

Please report cases of GBS or other clinically significant adverse events to the VAERS website at: http://www.vaers.hhs.gov/ or by telephone at 800-822-7967.

Additional information about GBS and MCV4 is available at: http://www.cdc.gov/od/science/iso/gbsfactsheet.htm

2007 Epidemiology & Prevention of Vaccine-Preventable Disease Course

Mark your calendars for CDC's live satellite course, Epidemiology and Prevention of Vaccine-Preventable Diseases, scheduled for January 25, February 1, 8 & 15, 2007. Each of the four-hour morning sessions will be located in Seattle at the Blanchard Plaza Building, 6th and Blanchard.

Registration forms will be mailed to VacScene subscribers and will also be available on our website at: http://www.metrokc.gov/health/immunization/providers.htm#training The broadcast may also be accessible via webcast. If you need additional information, call Maybelle Tamura at 206-296-5252.

Errata from September/October 2006 issue of The VacScene

In the article, "What's new with flu for 2006-07?" the information regarding the need for a booster dose of flu vaccine for children should read as follows:

"Additional emphasis on the need for children 6 months to <9 years who have not been previously vaccinated at any time with either live or inactivated flu vaccine [should] receive two doses of influenza vaccine before the onset of influenza season, if possible."

Continue to Vaccinate Against the Flu!

National interest in getting vaccinated against influenza has traditionally tapered off after Thanksgiving. Since flu activity typically does not peak until February or later, November through January are also good times to be vaccinated. This year, the CDC designated the week after Thanksgiving as National Influenza Vaccination Week, to raise awareness of the importance of continuing influenza (flu) vaccination, as well as foster greater use of flu vaccine through the months of November, December and beyond.

Although National Influenza Vaccination Week has passed, the intention is still important. Providers may want to build on this publicity by scheduling additional or special flu clinics; extending clinic hours; and enabling a larger role for mass vaccination at places such as retail locations. Providers can find information about ordering additional flu vaccine as well as suggestions about using later-season vaccine at the "Prevent Influenza Now!" website, **http://www.preventinfluenza.org/profs_late.asp** This website is a joint effort between the American Medical Association and the National Influenza Vaccination Summit. Vaccinations are recommended for anyone who wants to decrease the risk of influenza. While anyone can get influenza--and the infection can be severe--many groups, including people aged 50 years or more, those with chronic illnesses (heart disease, lung disease, kidney disease, diabetes), and pregnant women, are at highest risk for complications. In addition, health care personnel, and healthy household contacts and caregivers of high risk persons should get vaccinated to protect themselves and their contacts.

For the first time, CDC is recommending children aged 24 months to 59 months be vaccinated, since they are also considered at risk for complications of flu. Previously, the recommendation was limited to children aged 6 months to 23 months, who are nearly as likely to be hospitalized for complications due to flu as those aged 65 years and older. Children aged 24 months to 59 months are not as likely to be hospitalized as younger children, but are more likely than older, healthy children to see a physician or visit an emergency room for flu.

In the United States, between 5 and 20 percent of the population is infected with influenza, about 36,000 people die, and more than 200,000 people are hospitalized each year because of influenza complications. Since influenza is unpredictable, and different types and strains of influenza circulate throughout the flu season, the CDC's ACIP recommends that influenza vaccine be offered throughout the influenza season-- even after influenza starts to appear in a community.

Pneumococcal Polysaccharide Vaccine – When to Revaccinate?

Following vaccination with the 23-valent pneumococcal polysaccharide vaccine (PPV-23), antibody levels decline after 5-10 years and decrease more rapidly in some groups than others. Revaccination with PPV-23 is recommended only for those most at risk for acquiring pneumococcal disease and more likely to experience rapidly declining vaccine-induced antibody levels. Only **one** PPV-23 revaccination dose is ever recommended for high-risk persons (see table below for recommended revaccination intervals).

Persons ≥ 2 years of age who are expected to have a rapid decline in antibody include those with:

- functional or anatomic asplenia
- HIV infection
- leukemia, lymphoma, Hodgkin's disease, multiple myeloma or generalized malignancy
- chronic renal failure
- organ or bone marrow transplant
- immunosuppressive chemotherapy, including long-term systemic corticosteroids

Available data do not indicate a significant increase in protection in the majority of revaccinated persons. Because of the lack of data indicating improved protection with multiple doses of pneumococcal vaccine, routine revaccination of immunocompetent persons is not recommended.

The following table summarizes revaccination recommendations for persons at highest risk of disease, listing the interval between doses in the 'comments' column.

Summary of Recommendations for Revaccination with Pneumococcal 23-valent Vaccine

Age and Risk Group	Revaccination Recommendation		
	NO	YES	Comments
2 through 64 years, received 23-valent vaccine, not immunocompromised	X		
2 through 10 years old, and immunocompromised		X	One dose 3 years after previous dose
11 years and older, and immunocompromised		X	One dose 5 years after previous dose
65 years and older, vaccinated previously, and not immunocompromised • **First dose at 65 or older** • **First dose under 65 years old, less than five years ago** • **First dose under 65 years old, five or more years ago**	 X X	 X	One dose 5 years after previous dose

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Highlights

Personal Belief Exemptions Related to Higher Pertussis Incidence

School immunization requirements have contributed to the decrease in vaccine-preventable diseases in the U.S. Currently, 48 states allow parents to opt out of immunizing their child by claiming a nonmedical exemption (religious or personal belief). A study recently published in *JAMA*[1] reports the trends for nonmedical exemptions and the association of state exemption policies with pertussis incidence.

Researchers examined state-level data for students claiming an exemption to 1 or more vaccines during the years 1991 through 2004. The complexity of obtaining an exemption was categorized for each state. Pertussis incidence was analyzed for children ≤ 18 years of age for the years 1986 through 2004.

Among states offering personal belief exemptions, the mean exemption rate increased an average of 6% per year. States offering only religious exemptions had no significant change in exemption rates. The ease of obtaining a nonmedical exemption was also related to higher exemption rates. After adjusting for differences in demographics, pertussis incidence was 48% higher in states allowing personal belief vs. religious only exemptions. In states which easily grant exemptions, the adjusted pertussis incidence was 53% higher compared with states having difficult procedures to obtain exemptions. Limitations of this study include variability in the collection of exemption data, missing data and underreporting of pertussis cases.

As unimmunized children are at greater risk for acquiring and transmitting diseases, the trend for increasing exemptions is troubling. Vaccine safety concerns are cited by the authors as a principal explanation for parental hesitancy. The dilemma for public health policy is providing for parental autonomy while protecting the community from the impact of the decision not to vaccinate.

Washington State allows both religious and personal belief exemptions. Exemption rates have been increasing in King County over the past several years. (4.5% in 2004 vs. 3.0% in 2000). A similar increase has been noted for the state (4.4% in 2004 vs. 2.9% in 2000). As of 2004, 13 counties in Washington State had an exemption rate of 5% or greater.

[1] Omer, SB, et al, 2006. Nonmedical exemptions to school immunization requirements: secular trends and association of state policies with pertussis incidence. *JAMA.* Dec., 296(14):1757-1763.